2: Underhill E-5 (1931-1935)1939 NU28 Papago NU28

FOREWORD

The American Papago are found on three reservations, a large one and two small ones, in the southern part of Arizona, near the Mexican border. To the south are the Mexican Papago who live in the same villages with Mexicans and have largely intermixed with them. To the north are the Gila Pima, another branch of the same people who have had much more contact with White Americans than have the Papago. To the west and south are the small groups of Sand Papago, still largely unknown.

American Papago, Mexican Papago and Pima were once part of a large corn raising culture which included the Opata, Tepecano, Tepehuane, and other Sonoran peoples now extinct. The nature of their culture has been a matter of great interest as a link between Mexico and the cultures of the Southwest. The Papago were chosen for study because, though they were not so advanced as their congeners, their position in the desert has left them far less subject to White influence. Their reservation was set apart only in 1917 and they still retain many customs and ceremonies abandoned both by Pima and by Mexican Papago.

Five sojourns were made with the Papago: in June — October 1931, September — October 1932, February — October 1933, November — January 1934, October — November 1935. Most of the time was spent on the Sells reservation, the largest of the three though a few weeks were spent at San Xavier and some days below the Mexican border.

Even among the American Papago it was found that there were decided differences in dialect, customs and ceremonies and an effort was made to get data from each of the three important groups. One of these was often completely ignorant of traditions known to the others, so that it was no uncommon experience to have an informant in one village deny with amusement the possibility of some practise which those in the next village acknowledged as traditional. Since there are over 5000 Papago it was possible to get many points of view and their presence makes one realize how many shadings are found in a living culture which are lost or even distorted in those where only one or two informants are available.

Interpreters were used through the whole period, since I did not trust my rough conversational knowledge of the language

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

INTRODUCTION

121 THIS book was written as part of the Indian Education Research Project undertaken jointly by the Committee on Human Development of the University of Chicago and the United States Bureau of Indian Affairs.

The immediate objectives of this project were to investigate, analyze, and compare the development of personality in five American Indian tribes in the context of the total environment setting—social, cultural, geographical, and historical—for implications in regard to Indian administration. The ultimate aim of the long-range plan of research, of which this project is the first step, is to attempt a systematic evaluation of the whole Indian administrative program with special reference to the effect of the new Indian Service policy on the Indians as individuals, to indicate the direction toward which these policies are leading, and to suggest how the effectiveness of Indian administration may be increased.

This research has been carried on since 1941 through the co-operative efforts of a large staff drawn from several disciplines—chiefly anthropology, sociology, psychology, psychiatry, medicine, human geography, linguistics, education, and public administration.

The field program was to investigate the development of the personalities of about a thousand children six to eighteen years old, selected so as to represent one or more communities in each of the following tribes: Hopi, Navaho, Papago, Sioux, and Zuni. In tribes such as the Papago and the Sioux, where background data were relatively few, an anthropological study was also included in field work.

DDD The results of the project are being reported in monographs on the several tribes and in shorter reports on special phases of the research in all communities. Tribal monographs already published are: *The Hopi Way,* by Laura Thompson and Alice Joseph (University of Chicago Press, 1944); *Warriors without Weapons: A Study of the Pine Ridge Sioux,* by Gordon Macgregor (University of Chicago Press, 1945); *The Navaho* and *Children of the People* (2 vols.), by Dorothea C. Leighton and Clyde Kluckhohn (Harvard University Press, 1947). A study of the Zuni tribe is in preparation. Reports on special phases of the work are listed in the Appendix, and others are being prepared.

4: Joseph et al D, E-5 (1942-1943) 1949
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INTRODUCTION

PILOT STUDY AND GENERAL PROCEDURE

114 After the acceptance of the Indian Education Research Project by the Papago Tribal Council in February, 1942, a three-month "pilot" study was conducted on the Papago Reservation by Dr. Laura Thompson, Project Co-ordinator, Dr. Ruth Underhill, and Dr. Alice Joseph. Dr. Underhill, anthropologist with the Bureau of Indian Affairs, had already made extensive field studies among the Papago, and Dr. Joseph had worked with the group for a year in the capacity of Reservation field physician. With the help of the Tribal Council, the Sells Parent-Teachers' Association, and the Indian Service personnel, especially D'Arcy McNickle, field representative, and the teachers at the Sells, Vamori, Gu Achi (Santa Rosa), Choulic, Schuchk (Santa Rosa Ranch), and Kohatk schools, the investigators tried out a number of different kinds of tests and field-procedures. Based on results of the "pilot" field study, the following general procedure was adopted for the project as a whole:

125 The personalities and life-histories of a representative sample of children from each selected community were studied by means of a battery of psychological tests of both the projective and the performance types, supplemented by interviews with parents, teachers, and other community members and by medical examinations. The systematic study of individual personalities was limited to children of school age (six to eighteen years) because of their greater accessibility for the testing program. Much of the testing and interviewing was done by Indian Service teachers, trained and supervised by members of the research staff. Medical examinations and tests requiring experienced technicians for their administration, such as the Rorschach and the Thematic Apperception (adapted), were given by qualified staff personnel. The testing program is described in chapter xi.

122 Background data concerning the culture, the geographic environment, and the history were collected by anthropologists, who also drew on the literature, both published and unpublished, and on long-range plans prepared by the administrative personnel in co-operation with the Indians of each Agency.

Field findings were analyzed and interpreted by Project technicians at the University of Chicago.

SELECTION OF PAPAGO CHILDREN AND VILLAGES TO BE STUDIED

121 Owing to rather considerable regional differences in the degree of white contact on the Papago Reservation and to local variations in culture, it seemed advisable to select children from two areas, one representing a more acculti-

4: Joseph et al D, E-5 (1942-1943) 1949
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rated, the other a less acculturated, group. Lack of housing and war restrictions on transportation eliminated some of the villages. The advantage of having the teachers work with the Indians whom they knew affected the selection of villages and the placement of trained personnel in the field.

After due consideration it was decided to study the children from two areas: (1) Baboquivari District and (2) Hickiwan and Gu Vo districts. The former was considered to be the more acculturated. These areas belonged to different dialect groups to which different personality traits were attributed by the Papago. In Baboquivari District investigation was limited to four related villages: Topawa, Komelik, Supi Oidak (Cold Fields), and Choulic. The selected villages include 76 households with a total of 127 school children attending local government day schools at Sells and Choulic, local Roman Catholic day schools at Topawa and San Miguel, or off-Reservation boarding schools at Tucson and Phoenix.

In Hickiwan and Gu Vo the investigation was limited to the related villages of Hickiwan, Emika, Stoa Pitk, Hotason Vo (Charco 27), Tatia Toak (Roadrunner), Vaya Chin (South Well), Gu Vo, and Kuakatch. Schuchuli should have been included in the testing program but was not, an oversight resulting from lack of knowledge of village relationships before the study was begun. However, it was included in the anthropological background study. The selected western villages include about 38 households with a total of 89 children, some of whom attended local day schools at Hickiwan or Gu Vo or off-Reservation schools at Ajo and Phoenix.

The selected Papago children totalled 200 and were about equally divided by sex. The number of children who actually took each test, however, varied considerably because of the migration of families for off-Reservation employment, which increased in frequency during the months of research. No children from Tatia Toak were tested because all of them were off the Reservation with their families, who were working in the cotton fields; none from Kuakatch were tested because they objected. Exact data are given in chapter xi, Table 1.

FIELD PROCEDURE—BABOQUIVARI

The testing program in the four selected Baboquivari villages was carried out during the latter half of 1942 by Dr. Alice Joseph, who gave medical examinations and Rorschach and Thematic Apperception tests, and by the teachers of Sells, Choulic, Topawa, and San Miguel schools. Rosamond B. Spicer, an anthropologist with field experience among the Yaqui Indians of Arizona and northern Mexico, conducted the anthropological background study from October, 1942, to July, 1943. She spent the first eight months in Topawa and the

4: Joseph et al D, E-5 (1942-1943) 1949
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it desirable to establish the following age groups: six to seven, eight to ten, eleven to thirteen, and fourteen to eighteen.[1] However, in the following chapters age and sex differences are noted only when they seem particularly significant.

No one is an individual unit moving independently through life. The influences of other people and their reactions to him will, to a greater or smaller degree, determine the course and strength of certain of his own psychological reactions and evoke new psychological equivalents for new situations of social contact.

Therefore, what we usually consider as characteristics of a group of people (i.e., those qualities more or less common to all members beyond their distinguishing individualities) will probably not be limited to superficial modes of expression and certain manners of behavior. This study is planned to do more than report a dialect or a particular way of eating or dressing; we have tried to uncover specific attitudes and reactions deeply rooted in the personalities.

Since the interest of this study is in the Papago not only as human beings or as individuals but also as Papago—and indeed the practical problem of the Papago minority as it exists in the state of Arizona today alone would justify such interest—the report of the psychological analysis will be concerned primarily with those attitudes, reactions, and personality traits which seem to belong specifically to the Papago tribe and to distinguish it from other Indian tribes and cultural groups.

1. The same age groups were used for all the tribes studies in the Indian Educational Research Project except the Sioux.

4: Joseph et al D, E-5 (1942-1943) 1949
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Chapter XIII

HEALTH AND PERSONALITY

BEFORE judging a person's behavior and trying to trace its sources to certain conditions of his life or events of his past, it is necessary to find out first whether he is in good bodily health, as his attitudes may be determined or greatly influenced by physiological disturbances. Irritability resulting from acute or chronic diseases has a significance quite different from psychogenic irritability—for the individual who shows the reaction as well as for the people around him.

For a psychological analysis of a group of people the same holds true. It is conceivable, for instance, that a well-fed group may react to certain stimuli differently from an undernourished group. Therefore, medical examinations were considered a part of this personality study of Indian children.

Limited time and means precluded examinations more thorough than the routine health surveys of school children, hence biochemical methods, X-ray, basal metabolism tests, and the like could not be used. Obviously such a superficial exploration of health conditions also certainly missed many existing psychosomatic relations.

The physical examinations given the Papago children determined their weight and height, state of nutrition, vision, blood pressure, and pulse rate. Skin, eyes, nose, mouth, and throat were inspected, and heart, lungs, and abdomen examined. Deformities were noted. Special attention was given to symptoms of vitamin deficiencies, such as bleeding and ulcerated gums, fissures at the corners of the mouth, and obvious malformations of the bone structure typical of rickets. The neurological examination was limited to exploration of muscular tone and strength, of reflexes and of co-ordination. Because Papago children dislike to undress completely in front of other people, examination of the genitals was omitted. All medical examinations were given at the schools. Incidentally among the Papago, regular school attendance is not an indication of good health. A child's whim, the visit of a distant relative, a trip to the trader's, or the temporary need of help in the fields or at home is reason enough

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

Chapter XIV

THE INTELLIGENCE OF PAPAGO CHILDREN

KNOWING a people's mental approach to problems, the direction of their intellectual interests, and their capacity for organization of thought is a most important factor in understanding their personalities, because all human activity, in so far as it does not concern strictly biological matters, implies intellectual activity and shows its imprint.

In human contacts, if we are not to bring harm to others and to ourselves by requiring inadequate tasks or by misinterpreting incapacity as unwillingness, we must take into account degree and range of intelligence. In daily life this factor plays a considerable role in the establishment of interpersonal relations. Judgments of "intelligence" are usually made about the most casual acquaintances and are often tainted by vague or well-defined personal likes and dislikes: to dub a person "stupid" is frequently only to say that his opinions or way of life differ from one's own. In the complex of prejudices held by white persons against minorities, "inferior intelligence" has been one of the favorite themes.

During the past decades numerous tests have been devised which, by submitting the tested person to standardized conditions, try to eliminate subjective influences and to obtain comparable values for the degree of intelligence. Since these tests were standardized on white individuals and are chiefly concerned with those areas of mental activity which are considered of greatest importance and desirability in white Western civilization, they do not produce an absolute scale for intelligence but must be interpreted in relation only to those intellectual traits which they are designed to test. Even though such tests avoid personal subjective interferences, they are still open to varying degrees of cultural subjectivity.

There are, however, several tests which try to determine an "intelligence quotient" by the way in which the subject performs certain manual tasks. Being nonverbal and using material that is reasonably culture-free, these tests

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

121 are evidently the best for use with individuals of a cultural background different from that in which the tests were standardized. Both intelligence tests selected for the research on Indian education—the Grace Arthur Point Performance Scale and the Goodenough Draw-a-Man Test—belong to this group.

125 The results obtained from Papago children with the Grace Arthur test show a considerable difference in the average I.Q.'s of the western and eastern dis-
153 tricts studied. The test performance of the eastern children was on the average about equal to that of the white children on whom the test was standardized; the average I.Q. of the white children was 102.5; that of the eastern Papago children, 99.4 (see Table 3). In comparison with children of other Indian communities included in the research, the eastern Papago occupy exactly the median place. The much lower I.Q. of the western Papago children—86.9—puts them and one group of Navaho at the lower end of the scale.

153 Though this striking difference may be due partly to chance operating in the composition of the two Papago groups, other factors which may be influential should be taken into consideration. It is perhaps not a coincidence that, among three Navaho groups, the one with an I.Q. still lower than that of the western Papago was almost entirely composed of children who had never been in school. The majority of the western Papago children who took this test were listed as attending day school, but it is known that attendance is usually much more sporadic than in the eastern part of the Reservation. It is by no means an exception to hear of absences from school lasting several months, even years, and children often start school at the age of twelve or fourteen, attending perhaps for a total of one or two weeks during the whole school year. All these children are, however, listed as attending school. School training as a factor possibly influencing the results of the Grace Arthur test cannot therefore be disregarded in interpreting the test results, especially since the same factor is found combined with similar test results in another Indian group.

However, not only the western children's limited acquaintance with the handling of puzzles and mazes, such as are used in the Grace Arthur test, may have played a role in lowering the I.Q. The fact that western children are much less conditioned by previous training to give attention to and to be at ease regarding tasks which white persons require from them may have brought down the average I.Q. of this group. Moreover, it should be remembered that the western communities from which the children were chosen are distinguished from those of the eastern area by their particular resistance to white influence and especially to the introduction of schools. It is not known exactly how much the emotional attitude with which a person enters a test

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

Chapter XV

SOME EMOTIONAL PATTERNS OF PAPAGO CHILDREN

WE TURN now to other factors in the personalities of Papago children. The reader will recall from chapter xii that one of the tests (Emotional Response) is designed to discover emotional patterns by direct question and answer; the child is asked to tell about occasions when he was happy, sad, angry, afraid, or ashamed and to describe the best thing and the worst thing that could happen to him. Normal human beings, when asked directly to tell strangers about certain emotions, usually tend to be evasive in their answers, particularly if the questions evoke associations of sacred or intimate nature. But, when the evasive component is taken in account, such answers can be of great value for the discernment of personality structure. What is openly admitted varies according to the character of the individual because it leaves him a certain freedom of choice; besides, it reveals those roads of noncommittal safety which he thinks are sure to receive general approval. Thus, even if simple, direct questioning does not reveal very much about the true emotional background of a normal person's behavior, answers to such questions do show which areas of emotional experience appear to the subject to be safe and permissible to describe.

When a person who is asked by a stranger, "Tell me about a time when you were happy," answers, "I was happy when I was at the movies," it is quite possible that he really experienced memorable happiness there. But, without further explanation, it is not clear what was the immediate reason for his emotion or whether there might not have been much more significant occasions of happiness in his life which he does not want to communicate to a stranger. In an average case it may be inferred, however, that "movies" have a certain pleasant association for him, that they fall into his range of experiences, and that he considers them socially legitimate pleasures.

What an individual considers socially legitimate emotions, as well as his

4: Joseph et al D, E-5 (1942-1943) 1949
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153 121 selection of specific instances, may be clues to the understanding of his personality, because the nature of admitted and accepted emotional outlets reveals some of the tracks into which, under ordinary circumstances, a person's behavior is socially directed. In the analysis of an individual personality such findings have a meaning not so much by themselves as in correlation with the results of other, more complex examinations. In the analysis of the average personality structure of a group of people, knowledge of openly admitted pleasures, fears, and reasons for sadness, anger, and shame has a greater value by itself, because it may show the extent and the character of common areas of emotional experiences and behavior tendencies and thus contribute insight into the psychological cohesion of the group.

Moreover, in group interrelations, it seems to the writer that the face value of emotional and moral standards as admitted by most members of a group is largely responsible for what to an outsider appear as "group characteristics." It represents the kind of psychological evidence on which he bases his judgments and prejudices as well as his behavior toward members of the group.

153 The answers of Papago children to questions about occasions when they were happy, sad, afraid, angry, or ashamed were highly evasive, but the responses did not appear to be deliberately invented or calculated either to please or to challenge the tester. All the answers were short and given without elaboration or explanation. Apparently, whenever the children felt objection to the whole test or parts of it, they did not respond at all instead of groping in their minds for a suitable answer. Among these were children with high and low I.Q.'s alike. Only a small proportion of the children—9 per cent in the western area and 10 per cent in the eastern—rejected the entire test; but a much higher percentage rejected questions about one or several specific emotions. The number of eastern children who made partial rejections was about twice that of western children making such rejections.

In view of the resistance which in chapter xiii was assumed to play a part in contacts between western Papago and whites, these findings would appear incongrous, if consideration were not given to a new factor of influence inherent in the test itself. The Emotional Response Test is verbal and requires at least a [125] certain amount of understanding and speaking knowledge of English if given in this language. The test was given almost exclusively in English in the eastern communities, while the western children were tested in Papago with the help of interpreters.

Considering the inhibitions a child may feel when he is asked to tell about his experiences in a language which he has not mastered, the differences in the number of rejections found in the two areas may indeed be based mainly

4: Joseph et al D,E-5 (1942-1943) 1949
NU28 Papago NU28

Appendix

PERSONALITY SKETCHES OF EIGHT PAPAGO CHILDREN

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In this appendix we present eight case studies of Papago children. The purpose in doing so is twofold. First, the writer wishes to counteract misconceptions and generalizations which easily arise from attempts at group analysis. Group dynamics, by the establishment of certain types of reaction may deeply affect, but do not exclusively determine, the development and growth of the individual personality. Within the general pattern, constitutional factors and personal experience will always result in individual differences which defy simple reduction to cultural formulas.

The second purpose is to relieve the reader of the feeling of strangeness and remoteness that inevitably arises when one is confronted with an entirely generalized picture of a people, by introducing him to several individual Papago. To millions of people the story of an individual "G.I. Joe," with the details of his home, family, and specific experiences in a geographically localized foxhole, makes war real as no analysis of the underlying sociopsychological forces can do. What the story of an individual "G.I. Joe" actually contributes to the understanding of war is little. It is probably not even representative of the experiences of the majority of soldiers, and generalizing it would be a grave mistake. But it is a medium which, by specification, provides a vicarious participation in unfamiliar experiences and thus is a help to understanding on less personalized levels.

These eight Papago children cannot be considered representative of the whole group studied. They were chosen for only one reason: these children had taken the entire gamut of tests employed in the research. They do not represent the range of economic conditions found on the Reservation, nor are other aspects of their lives typical. For instance, five of the selected children are Roman Catholics, and five show in their family background uncommon elements of status and prestige and thus do not reflect the actual distribution of these factors among the Reservation population.

5: Castetter & Bell N-5 (1938-1940 1942
NU28 Papago NU28
Pima NU29

PREFACE

Scattered data on the early agriculture and other aspects of the economic life of various Indian groups in the Southwest are available in the literature, but treatises covering the primitive basis of subsistence of specific Indian groups, such as Hill's *The Agricultural and Hunting Methods of the Navaho Indians* and Whiting's *Ethnobotany of the Hopi*, are rare. Wilson's *Agriculture of the Hidatsa Indians*, a Plains tribe, must be regarded as the best account of the technique of Indian agriculture yet published. It is our purpose, therefore, to issue within the next few years a series of comprehensive studies, of which this is the first, presenting the early basis of subsistence of the several Indian groups in the Southwest, with special emphasis placed on agriculture.

The material herein presented is based upon field studies made by the authors among the Pima-Papago in the fall of 1938, 1939 and 1940, supplemented by data gleaned from the relevant historical, ethnographical and archaeological literature. The field studies were made among the Pima on the Gila River Indian Reservation, centering at Sacaton, Arizona; the Papago on the Papago Indian Reservation with headquarters at Sells, Arizona; the Papago on the reservation at San Xavier; and a few Papago on the so-called Maricopa Indian Reservation at Maricopa, Arizona.

The method followed in doing the field work was for the authors to work independently, each with his own informants and interpreters, then compare notes at the end of each day.

Obviously, differences in agricultural technique exist in different parts of the Papago and Pima territories. There is always danger of over-formulating procedures, such as the method of planting, and the reader is cautioned against regarding any such operation or aspect of agriculture as stereotyped. It is realized that among both peoples sub-units

8: Pijoan, Elkin & Eslinger D-5 (ca. 1942)1943
NU28 Papago NU28

which involves the dietary intake and the level of ascorbic acid in blood plasma. The dietary intake of ascorbic acid found necessary to maintain a plasma level of this organic acid has varied with the techniques used by investigators. Widenbauer ('37) determined that a daily intake of 22 mg. was necessary to maintain a fixed plasma ascorbic acid concentration; Hathaway and Myer ('41) reported 31 mg., and Bessey and White ('42) in careful studies of children arrived at the conclusion that 3 ounces of orange juice plus what was present in the diet seemed an ideal intake to maintain a level of presumably 40–50 mg. a day. It can be assumed, on the basis of such investigations, that from 30–50 mg. are required to sustain ascorbic acid economy. It is not the purpose of this communication to ascertain the ascorbic acid requirements of Papago Indians but rather to ascertain the amount of ascorbic acid in their food and the plasma level. At the onset we were intrigued by the frequent occurrence among the Papagos of the common finding of a hemorrhagic diathesis in their gums, and in some cases on the ankles and other portions of the body that were most subject to trauma. We felt that the disease of latent or subclinical scurvy was a possibility among these people and that this deficiency might be responsible for its numerous insidious effects.

The method of assay for plasma ascorbic acid was that of Mindlin and Butler ('38) but without the use of cyanide; and that described by Bessey ('38) for foods. Two groups of children, from 6 to 15 years of age, were studied: a group at the Sells School where school lunches are provided, and a group in an isolated community known as Cowlic. School children were used because they were more acculturated and cooperative, the adults being quite primitive and to a greater degree intractable and less amenable to study.

The plasma ascorbic acid findings among twenty-eight children were as follows: one child had a value of 0.660 mg. per cent, which was the highest content observed; two had values of 0.528 mg. per cent, and the rest varied from the lowest ascorbic acid content of 0.264 mg. per cent to 0.396 mg. per cent.

18: Kelly E-4, 5 (no date) 1963 NU28 Papago NU28

FOREWORD

The studies upon which this report is based had their inception in a series of Papago Tribal resolutions and proposals dating back to the summer of 1958, and in the continuing effort on the part of the Bureau of Indian Affairs and members of Congress from Arizona to find a solution to the very pressing economic situation of Papago Indians.

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In the summer of 1958 the Papago Tribal Council and the Association for Papago Affairs, an organization of Indians and other citizens of Southern Arizona, requested Arizona's Congressional delegation to join together in a bipartisan effort to secure federal appropriations for a complete and detailed study of Papago reservation resources, economic conditions, and the Papago manpower potential. The intention was to secure the facts upon which a Papago development plan could be based in order to assure: "That the Papago Indians and their reservation will assume a place of security, dignity, and economic importance in the broader community which includes the reservation, and that the Papago people may continue to be masters of their individual and tribal destiny in the Arizona of tomorrow."

Resolutions authorizing the above studies were introduced in the Senate by Barry Goldwater and in the House by Congressman Stewart Udall, but Congress failed to take action. During the spring of 1960, at the continued urging of the Papago Tribal Council, the Association for Papago Affairs and many individuals, notably William S. King, Chester Higman and Douglas Holeclaw, Senator Barry Goldwater with the help of Roger Ernst, at that time Assistant Secretary of the Interior, secured an allocation of Bureau of Indian Affairs funds for the purpose of conducting a Papago study. Arrangements were then made, in March of 1960, for a contract between the Bureau of Indian Affairs and the University of Arizona in which the Bureau of Ethnic Research was assigned two parts of the larger study proposed in 1958: (1) A manpower survey which would consist of employment data

121 and supplementary information on adult Papago Indians, the data to be presented
122 in the form of a detailed listing of information on individuals, accompanied by
657 an interpretive summary report. (2) A survey of the current use by Indians of
[127] Papago agricultural and stock raising resources. This material, plus much other information on the Papago and the Papago reservations which had been gathered through the years by the University of Arizona, is contained in the following report.

The most important additional information consists of the demographic and sociological data contained in the Bureau of Ethnic Research Papago Population Register which was assembled under the sponsorship of the National Cancer Institute. It was understood that the manpower information in Chapter IV of this report would be drawn principally from our Papago Population Register which, incidentally, was not completed until the first week in October of this year.

121 Members of the staff of the Bureau of Ethnic Research, in connection
657 with the above contract, have also agreed to serve as consultants in the preparation of a Papago Development Program which will be based, in part, upon the material in this report. The need for such a Program was stated fully in the 1958 Association for Papago Affairs resolution:

> "Whereas, the Papago Indian Tribe, the second largest tribe of Indians in Arizona, has repeatedly asked for an assistance program from the federal government in the form of the Papago Development Program which was written almost ten years ago; and
>
> "Whereas, the Papago Development Program, no longer considered to be applicable by the Bureau of Indian Affairs, was written without sound knowledge of certain basic facts about the Papago people and their reservation such as: The size of the Papago Tribe; the residence patterns of its members; detailed and quantified information concerning family income; the extent and composition of the Papago labor force; trends in Papago economic adjustment; conditions of Papago health, education, and welfare; the economic potential of the reservation, especially mineral deposits, etc.; and

18: Kell/ E-4, 5 (no date) 1963 NU28 Papago NU28

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"Whereas, the Papago Development Program was conceived and written with only a minor consideration of the relationships between the Papago people and their reservation to the rest of Southern Arizona; and

"Whereas, Southern Arizona is one of the fastest growing regions in the nation; and this growth, both economic and in terms of population increase, cannot help but influence the direction in which Papago life will move in the future."

Reliable information is, of course, required in the preparation of any long range areal program. The need for such a program for the Papagos requires no special study. The most casual acquaintance with the reservations discloses the general nature of the depressed economic conditions which have merely been documented and measured in this report.

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A great many individuals have assisted in gathering the material upon which this report is based. Primary recognition must be given to Dr. Robert A. Hackenberg who, as assistant director of the Bureau of Ethnic Research, was in charge of the project which produced our Papago Population Register. His chief assistants were Frank DeMaritt, Charles Cook, William B. King, Ella Rumley and Beverly Solheim. Richard B. Woodbury and Nathalie F.S. Woodbury collected most of the material on reservation farming and stock raising. Harland Padfield both conceived and executed the study which has provided the data for our analysis of Papago employment on Pima County farms. Richard Jones made the study of Papago welfare and, using some material previously collected by Delmos Jones, gathered and wrote the material for the section on Papago reservation settlements. Charles Hoffman and Peter Hemingway secured the data on Papago reservation wage workers as well as some other information, including additional data on reservation agriculture. Peter Hemingway also performed the remarkable feat of sorting the many thousands of I.B.M. cards to produce the data for our employment tables within three weeks of the time he first saw an I.B.M. machine. Maps were prepared by Frances Benmayor and Richard Woodbury. Last minute editing, correcting, tabulating and trouble shooting was the very competent hands of Patricia Anderson. The

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Chapter I

HISTORY

The modern Papago, and their effort to adjust to the American industrial civilization around them, cannot be understood apart from the traditions and values that have come down through the years from the ancestral Papago society which occupied this same region in pre-Spanish times. The contrast between the Papago society and economy of 1700 and modern American industrial life is as great as the contrast between any two societies in the world today.

Linguistically, the Papago dialects--still spoken in the vast majority of Papago homes--are classified with the Pima-Papago division of the Piman language which, in turn, is grouped with the larger Uto-Aztecan stock which is made up of Indian languages spoken from southern Mexico to the borders of Montana and Wyoming. Culturally, the Papago are related to the desert tribes of northwestern Mexico, western Arizona, southern California and Nevada.

As a group these so-called "Rancheria" cultures are characterized as having loose political organization with little authority vested in the chief or headman;

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Table 3. Papago Population by Districts 1914 and 1959

District	1914 (Clotts)	1959 (BER)
Baboquivari	949	562
Chukut Kuk	512	214
Gu Achi	695	531
Gu Vo	200	230
Hickiwan	222	346
Pisinimo	396	330
Schuk Toak	565	370
Sells	659	1,026
Sif Oidak	1,115	552
Total	5,313	4,161

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The Present Population. The information which follows is derived from a Papago population register secured by the Bureau of Ethnic Research in 1958 and 1959 in connection with a research project sponsored and in major part financed by the Biometry Branch of the National Cancer Institute. The work was under the direction of Dr. Robert A. Hackenberg and cooperating agencies were the Papago Tribe, the Division of Indian Health of the Public Health Service, the Bureau of Indian Affairs, and the Arizona State Office of Vital Statistics.

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A population register is not a census. It is intended to serve as a permanent record of identifiable

members of a distinctive group -- in this case the Papago -- and, except for its non-legal status, amounts to a tribal roll. Although of potential value to tribal and federal administrators, the Papago population register is primarily a research tool. It is a "universe" of individuals who are the descendants of members of the Papago tribe in pre-reservation days. It is not confined, therefore, to the present residents of the Papago reservations, but includes identifiable Papagos wherever they may be living. A great deal of information can be secured from the register as it now stands, and changes in the register which will take place as it is maintained through time will provide additional data for analysis. Of even greater importance will be its use as a total population record from which samples may be drawn for a wide variety of social, economic, and health studies. It was, of course, an interest in studies of Indian health that led the National Cancer Institute to support the preparation of a Papago population register.

Methods and techniques used in the preparation of the register, together with full reports on the data secured, have been and will be published by Dr. Robert A. Hackenberg (1961). The problem of the reliability of the data, however, should be mentioned here.

No test has been conducted to determine the extent of over enumeration, under enumeration, or false enumeration. This will be done in the near future. Field

Data from records was available for only about two thirds of the individuals enumerated. Such data as kinship, present residence, village of origin, employment, and the educational level of adults, was secured entirely from field interviews.

A census defines the individuals to be enumerated in terms of their geographical location. A population register defines individuals on the basis of their membership in a specific group. One of our first tasks, therefore, was to define a Papago. The definition used by Dr. Hackenberg (1961) is given below. It can be made operational because we have records of the individual builders of dwellings on the three Papago reservations*, and because we have lineage data which give us the network of Papago kin ties.

1. A person will be considered a Papago Indian if he constructed a house within the limits of the Papago Reservations (Sells, San Xavier and Gila Bend), unless he fails to meet the terms of #3 below.

2. A person will be considered a Papago Indian if he is either a lineal or collateral relative of such a housebuilder unless he fails to meet the terms of #3 below.

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* Papagos do not live on the Gila Bend Reservation. Papagos living adjacent to the Reservation, however, are traditionally considered "reservation Papagos".

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Papago Agricultural Workers in Pima County. Agricultural work off the reservation is of such great importance to Papago family economics that we felt it necessary to make a special study of this subject. The project was planned and executed in 1961 by Mr. Harland Padfield, a Department of Anthropology graduate student who is an authority on this subject. Unfortunately, the study was limited to Pima County since funds did not permit the extension of the research to other sections of southern Arizona.

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Mr. Padfield was able to establish two points: (1) Papago Indians in farm work are shifting to other jobs than seasonal cotton picking and are not being displaced because of mechanization, (2) they account for 30 percent of the total man-hour input and 27 percent of the total wage input on Pima County farms and receive total annual earnings of about $630,000. The evidence, although not conclusive, also indicates that there is a steady increase in the training and use of Papagos in the operation of farm machinery and in other skilled jobs.

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The author concludes his report with the following words: "These data should make it patently clear that with the Papago Reservation virtually surrounded by 370,000 acres of farm land needing a labor force in excess of 10,000 workers and a labor expenditure probably in excess of $13,000,000 annually, programs and policies aimed at the problem of Papago economics cannot ignore farm labor; neither can programs and policies aimed at the problem of farm labor ignore the Papago Indians."

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Padfield's work was based upon an area sample which permitted him to generalize from detailed interviews with 21 of the 119 farm operators in Pima County with a total acreage of 29,796 out of 66,875. Data thus collected was supplemented through interviews with crew leaders who recruited the seasonal workers, mostly cotton pickers, for the farms drawn in the sample.

the process of job upgrading which has moved other ethnic groups from seasonal farm work to temporary and permanent farm work to urban industrial employment.

Papago Welfare Programs. There is little or no evidence that Papago Indians have taken undue advantage of welfare programs. On the contrary, there is much evidence that state and federal welfare payments make the difference between complete and painful poverty and a bearable standard of living for many reservation families. This last statement holds particularly true for the old people--close to 60% of all welfare payments go to individuals over 65--who are especially vulnerable under modern conditions.

To learn more about this problem, and its place in reservation family economics, Mr. Richard Jones, graduate research assistant in the Bureau of Ethnic Research, was assigned the task of gathering and analysing necessary data. His work was thorough, covering all phases of welfare administration, welfare costs, and the effect of welfare on Indian families. A summary of his findings is given below.

Information gathered from the Indians themselves very obviously gives an undercount of welfare cases. We report a total of 390 individuals (on and off reservation) who received unearned income in 1959. The official number of cases, reported by Jones for reservation residents alone for 1959 was 448. We report a total of 206 individuals over the age of 65 receiving unearned income while Jones reports 266 cases of Old Age Assistance (39%).

It is not likely that Papagos would deliberately withhold information on welfare. The difference is probably to be found in the welfare cases among the 990 on whom we have no employment data, and in the reporting of individuals receiving welfare as "unemployed". In any event, we were forced to depend upon informants since welfare information, which identifies the recipient, is confidential and so not available to us.

of days or weeks they are actually employed during the year. Average annual earnings for this group of 803 individuals would probably be located somewhere between the average income of welfare recipients ($861) and the individuals engaged principally in reservation farming and stock raising ($2509).

Only a sample survey, now made possible by the existence of a Papago population register, could determine more precisely the annual income of Papago adults, or Papago families. The answer, whatever it might be, would add little to our knowledge. We know the nature of Papago employment, we know the approximate numbers of individuals in each of the categories of employment, and we know the magnitude of the problems of unemployment, underemployment, and dependence upon welfare. To know the dimensions of a problem, however, is only the beginning. This must be followed by an examination of the facts which may lead to a solution. A great deal, but by no means all, of the necessary information is contained in this report. The task of analysis, however, must be deferred at this time except for certain more obvious considerations which are treated below.

Conclusion. The outstanding fact, and this runs as a thread through all our statistics, is that the Papago Indians are solving their own problems. Starting from very nearly "zero" in 1917, when the Sells Reservation was established, the Papagos have shown great skill and persistence in finding ways to remain self-supporting in the face of meager resources and a rapidly changing world around them. They have done more than this. A substantial number--more than 300--Papago boys and girls have secured an education and have moved into productive employment as skilled and semi-skilled workers. Another substantial group, about 38% of all adults, have found permanent and near permanent employment on and off the reservation in spite of language, cultural, and educational handicaps.

The trend of events is clearly discernible in our material. Papago families remain on the reservations, taking advantage of all possible income

19: Dobyns E-5 (1950) 1951 NU28 Papago NU28

657 The Indians of the Southwest solved their dilemma by seeking work to support themselves while they struggled for greater political power (even while becoming an ever smaller minority in the total population), and pled with Congress for huge appropriations to rehabilitate their abused reservation lands.

The Indian Bureau attacked the economic problem where its officials recognized the situation and could with funds allotted by Congress. Bureau administrators know wages from agricultural harvesting contribute a large share to Southwestern Indian income. They have long wanted more exact knowledge of effects upon natives produced by their experience in the fields, and the role Indians play in the economy of Southwestern agriculture.

121 [122] Accurate knowledge is essential for intelligent and effective administration. Recognizing this fact, the Indian Bureau agreed to a grant to the University of Arizona's Department of Anthropology for an attack on one phase of the problem.

This report is the result. It is a report on the role of one Southwestern Indian tribe in the cotton harvest on Anglo-owned irrigated lands near its tribal reserves. It is a picture in microcosm of the economics of all Indians of the region at mid-century, except for specific tribal peculiarities inherent in a different culture and location. It is an example of adjustment of an Indian tribe to demands arising from close and intimate contact with an increasing Anglo population majority, and to their insufficient land base.

WHO--this report is about--Papago Indians

This report is concerned specifically with the role in the southern Arizona cotton harvest of over 7,000 Papago Indians who live along the Mexican border. These natives speak a Piman language closely related to others spoken from the Gila River south to the border of Sinaloa in Mexico. They call themselves the Tohono Au'autam, The Desert People.

A few hundred Desert People live on the Mexican side of the border. Some inhabit Indian rancherias--villages with houses scattered barely within sight of each other--close to the frontier, and have contacts with American Papagos. Others eke out a parasitic existence around towns of Mexicans who have taken their lands. They are said to have given up their Indian heritage and are waiting passively to die.

The thousands of Desert People in the U. S. are a people with hope and pride in being Indian. A few hundred make a living in low paid jobs in Anglo cities. They have chosen to break away from their Indian heritage in an endeavor to give their children a head start as citizens of wider Anglo-American society, especially by affording them a formal education in public schools.

Most of the Desert People, however, live in rural semi-desert areas reserved for them by the U. S. from their former territories. The San Xavier community was reserved some of its lands in 1874 by Presidential Executive Order. This 71,090 acre reserve slices through the Santa Cruz River bottoms, and could once be irrigated with surface flow (until Anglos started erosion that cut the channel--and the water table--20 feet below surface) and now is irrigated from wells. Most of it was allotted to individuals, and the useable agricultural and range land is now mostly in heirship status. That is to say its use is amazingly and cripplingly complicated by the fractionalization of holdings through inheritance. Fortunately, the San Xavier community continues to recognize old use-rights more than the legal allotment system.